

Application No.: 10/676,877

REMARKS

Claims 1-5 and 8-14 stand rejected under 35 U.S.C. § 112, second paragraph. It is respectfully submitted that the enclosed amendment obviates the alleged indefiniteness. Accordingly, it is respectfully requested that this rejection be withdrawn.

Claim 1 is the sole rejected independent claim and stands rejected under 35 U.S.C. § 102 as being anticipated by Noda et al. '802 ("Noda") and Maszara et al. '112 ("Maszara"). These rejections are respectfully traversed for the following reasons.

A. Noda

Claim 1 recites in pertinent part, "a first step of implanting, into a channel formation region of a semiconductor substrate, first dopant ions ...; a second step of implanting second dopant ions into the semiconductor substrate ...; *after the first and second steps*, a third step of performing a first thermal treatment ...; and *after the third step*, a fourth step of selectively forming a gate insulating film on the semiconductor substrate and a gate electrode on the gate insulating film."

In contrast, the alleged third step of a first thermal treatment of Noda is performed *before* the alleged second step of implanting second dopant ions. Specifically, Figure 5a of Noda illustrates the alleged first step of implanting ions to form the diffused layer 303, and immediately thereafter (i.e., before the alleged second step of implanting ions to form an amorphous layer disclosed at col. 12, lines 35-36 corresponding to Figure 5d), the alleged first heat treatment is performed (col. 12, lines 1-6).

Further, in Noda, the alleged fourth step of forming a gate insulating film and gate

Application No.: 10/676,877

electrode is performed *before* the alleged second step of implanting second dopant ions. Specifically, Figure 5b illustrates the alleged fourth step of forming the gate insulating film 301 and electrode 302 (col. 12, lines 13-17), and thereafter, the alleged second step of implanting ions to form an amorphous layer is performed (Figure 5d; col. 12, lines 35-36). In this regard, Noda utilizes the gate electrode as a mask for the alleged second implantation step.

B. Maszara

Claim 1 recites in pertinent part, "a second step of implanting second dopant ions into the semiconductor substrate to form an amorphous layer expanding *from the substrate surface* to a region of the substrate deeper than the dopant implantation layer" (emphasis added). One exemplary embodiment of this formation is shown in Figure 5a of Applicants' drawings, in which the amorphous layer extends from the substrate surface. In contrast, the alleged amorphous layer 102 of Maszara is expressly disclosed as extending from a surface 106 below the substrate surface 110 and below a crystalline layer 112 (*see, e.g.*, Figures 1-2; col. 2, lines 40-44 of Maszara disclosing that a "shallow crystalline layer 112 is above upper A/C interface 106 because the relatively low quantity of silicon or germanium atoms is not enough to amorphize the crystalline structure of substrate 100 in that layer).

As anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed, either expressly or inherently (noting that "inherency may not be established by probabilities or possibilities", *Scaltech Inc. v. Retec/Tetra*, 178 F.3d 1378 (Fed. Cir. 1999)), in a single prior art reference, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986), based on the forgoing, it is submitted that neither Noda nor Maszara anticipate claim 1, nor any claim dependent thereon.

Application No.: 10/676,877

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claim 1 is patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination. Based on the foregoing, it is respectfully submitted that all pending claims are patentable over the cited prior art. Accordingly, it is respectfully requested that the rejections under 35 U.S.C. § 102/103 be withdrawn.

CONCLUSION

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below. To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

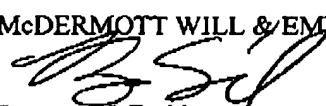
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Respectfully submitted,

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